U.S. ENVIRONMENTAL PROTECTION AGENCY
POLLUTION/SITUATION REPORT
Bulk Chemicals - Removal Polrep
Final Removal Polrep

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Region III

Subject: **POLREP #5**
Final POLREP: Site Stabilized / PRP Removal Action Complete
Bulk Chemicals
A39M
Shoemakersville, PA
Latitude: 40.4712472 Longitude: -75.9717015

To: R3 RRC Response Center, USEPA
Melissa Linden, EPA
Walter Bair, PADEP Emergency Response

From: Kelley Chase, On-Scene Coordinator
Date: 9/5/2019
Reporting Period: July 9, 2019 through September 5, 2019

1. Introduction

1.1 Background

Site Number:	A39M	**Contract Number:**	
D.O. Number:		**Action Memo Date:**	
Response Authority:	CERCLA	**Response Type:**	PRP Oversight
Response Lead:	EPA	**Incident Category:**	Removal Action
NPL Status:	Non NPL	**Operable Unit:**	
Mobilization Date:	6/10/2019	**Start Date:**	6/10/2019
Demob Date:	7/10/2019	**Completion Date:**	9/5/2019
CERCLIS ID:		**RCRIS ID:**	
ERNS No.:		**State Notification:**	6/10/2019
FPN#:		**Reimbursable Account #:**	

1.1.1 Incident Category

Emergency Removal Site Evaluation / Oversight of PRP Removal Action w/o Enforcement Tool

1.1.2 Site Description

The Site is an operating chemical manufacturing facility located in a residential neighborhood in Perry Township. The company, Bulk Chemicals, Inc., (BCI) has been operating at this location for over 40 years. BCI stores a variety of chemicals on-site which are used to produce industrial pretreatment chemicals and industrial metal cleaners. Many of the chemicals on-site are highly corrosive. Strong oxidizers and some flammable chemicals are also stored and used at the facility.

The Site is approximately one acre in size consisting of two large warehouse buildings located in close proximity to one another. The upper warehouse is generally used to store finished product in totes, drums and other containers. The lower warehouse/plant is used for storage of raw materials in large tanks, totes, drums and other containers and for the production of various industrial chemical products. The lower warehouse/plant was recently impacted by a nitric acid release and the a subsequent fire.

The lower warehouse/plant contains, among other things, six or more large bulk storage tanks; six or more large process tanks; and three large waste water storage tanks. The nitric acid tank that spilled, possibly due to a failed gasket, has a capacity of about 4500 gallons. The warehouse has two large shelving rack systems that include up to five levels each. The facility stores various raw chemicals on these racks and on the floor. The containers on the racks, include 55-gallon steel and poly drums as well as other containers and bags of various raw materials. In addition, the warehouse is used to temporarily stage large 275-gallon totes containing various raw materials, finished materials as well as collected process waste water.

Approximately 33 totes were estimated to be staged inside the warehouse; many were stacked at least two high; at least three of the totes were stacked three high. Many of the totes were damaged as a result of the nitric acid release. Several totes leaked creating a highly corrosive atmosphere inside the building. An estimated 250 drums and various other sized containers are also present and in various stages of degradation primarily due to the corrosive atmosphere. The subsequent fire further damaged certain containers including at least one of the facility's waste water tanks and portions of the building. The electric service to the facility has been shut off.

1.1.2.1 Location

809 Mohrsville Road
Shoemakersville, Perry Township, Pennsylvania 19555

1.1.2.2 Description of Threat

On Sunday, June 9, 2019 the Shoemakersville Fire Company, Berks County Department of Emergency Services and the Pennsylvania Department of Environmental Protection (PADEP) responded to a release of nitric acid at the BCI facility on Mohrsville Road in Shoemakersville, Perry Township. An estimated 2200 gallons of 62% nitric acid was released from a storage tank due to equipment failure. Nitric acid is highly corrosive and is a listed hazardous substance under the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA).

The impacted nitric storage tank is located inside one of two large facility buildings (lower warehouse/plant). The spill was not fully contained within the building and an unknown quantity of nitric acid was released to the ground outside the facility property. On Sunday, June 9, Berks County responders transferred the remaining nitric acid, approximately 2300 gallons, from the leaking storage tank to a process/blending tank within the same building, thereby preventing further release from the tank. However this material will need to be transferred to a competent storage tank or totes. BCI's contractors then began to conduct a cleanup of the facility. The following morning, Monday June 10th, a fire started in the lower warehouse which then compromised a waste water holding tank. The Shoemakersville Fire Company responded quickly. Once the fire was fully extinguished, BCI's contractors resumed cleanup activities to address the inside of the building and the release that occurred to the ground outside the building both as a result of the initial release of the nitric and the subsequent release from the damaged waste water tank and as a result of the firefighting efforts.

The majority of the totes stored in lower warehouse/plant and at least one of the waste water storage tanks have been damaged and some are known to be leaking. The condition of other containers is largely unknown at this time. Conditions inside the building have prevented a complete assessment. The atmosphere inside the warehouse continues to be highly corrosive. These conditions are expected to lead to the ongoing degradation of containers stored in the building. Based on review of the facility's current inventories, many of the chemicals in the degraded totes and other containers stored on the racks are incompatible. Further degradation of the containers and to the racks may lead to further release of hazardous substances.

Residences are located adjacent to the Site to the north, south and west; there is an active railroad located adjacent to the facility to the east; and the Schuylkill River is located about 200 feet to the west. Residents in the immediate area were asked to temporarily evacuate their homes during the initial release and again during the subsequent fire. The residents have since returned to their homes. There are ongoing concerns about the air quality and about whether private drinking water wells in the area were impacted.

1.1.3 Preliminary Removal Assessment/Removal Site Inspection Results

Given the volume and nature of the chemicals remaining in the building and the conditions at the Site following the nitric release and subsequent fire, PADEP requested EPA's assistance. Since arriving on the scene on June 10, 2019, EPA and PADEP have been coordinating with local agencies and BCI to assess conditions at the facility and are overseeing stabilization and cleanup efforts being conducted by BCI and its contractors.

Upon arriving on-site late Monday, June 10th, EPA OSCs met with the facility owner and state and local officials. The OSCs, along with EPA Superfund Technical Assessment & Response Team (START) contractor representatives conducted an initial assessment of conditions at the facility and observed the response actions being conducted by the BCI's contractors. A significant amount of vapors were still emanating from lower warehouse. BCI's contractors were working to clean the floor inside the building. In an attempt to neutralize the acidic liquids (a mix of nitric acid, waste water and fire suppression water) remaining on the floor of the building, the contractors were applying a mix of soda ash and oil dry. The contractors were shoveling the material into poly drums.

Facility representatives indicated that in addition to their typical inventory, there were totes containing various chemicals stored inside, some of which contained incompatible materials. However, they did not have much information about the current condition of these totes. In addition, a second contractor arrived with a vacuum truck and pumped the nitric acid/waste water/fire suppression water mix that had been collected in a temporary containment just south of the building. PADEP officials worked with the facility and contractors to improve containment as rain water continued to accumulate in this area.

To obtain additional information, the START contractor conducted a limited assessment of the containers and conditions inside the lower warehouse. A team of two START contractors made a Level B entry into the building. The OSC requested and all parties agreed that no cleanup activities would be conducted during their entry. BCI's contractors entered the building with START to evaluate the current condition of the totes. It was not possible to conduct a complete assessment due to safety concerns. START was able to determine that approximately 33 totes were staged inside. Where possible, START collected information from labeling on the totes and documented the conditions of the totes that were readily accessible. START found that many of the totes were badly degraded and that several were leaking or appeared to have leaked there contents. The totes on the floor, which are expected to have been in direct contact with the nitric acid, were badly damaged and the metal cages were deteriorated. In some cases the stacked totes were leaning badly. In addition, some of the totes that were stacked higher up were also damaged. Based on the condition of the totes, BCI and its contractors determined they would not be able to be moved at that time.

Based on the initial assessment activities by EPA and START and overall observations of the ongoing response, the OSC expressed concerns to BCI owners regarding safety issues and the need to bring in additional resources before proceeding with additional activities. BCI officials were cooperative and work overnight to obtain additional resources.

On Tuesday, June 11, 2019, EPA mobilized additional resources to set up continuous air quality monitoring. Initial monitoring locations included the perimeter of the facility as well as locations closer to the building. EPA monitored for acid gases and for compounds that could result due to the nitric acid release that occurred including nitric acid, hydrogen fluoride, hydrochloric acid and oxidizers. Perimeter monitoring was also conducted for volatile organic compounds. Since continuous air quality monitoring began, all levels in outdoor monitoring locations both on the facility and in perimeter areas were within acceptable limits. Monitoring is also being conducted to evaluate conditions inside the lower warehouse.

2. Current Activities
2.1 Operations Section
2.1.1 Narrative

All response actions to stabilize the site and address conditions which pose a threat of release or further release of hazardous substances, pollutants or contaminants were conducted by BCI. Prior to EPA's arrival on-scene, BCI had obtained several contractors to conduct initial stabilization and cleanup activities. EPA arrived on-site late Monday, June 10, 2019. BCI brought in additional resources on June 11, 2019. From June 11 through July 10, 2019, EPA and PADEP jointly oversaw response efforts conducted by BCI and its contractor, Lewis Environmental. From June 17 to June 28, 2019 two USCG Atlantic Strike Team personnel were on-site to assist with oversight of health and safety of operations.

Conditions in the lower warehouse were found to be highly corrosive. Lewis's operations typically consisted of level A entry teams and decon teams in level B. Heat stress was a major concern. Initial operations focused on improving access to the lower warehouse/plant, removing remaining liquid from the floor of the building, stabilizing compromised totes and other containers impacted by the nitric release and subsequent fire. Operations involved the transfer of product from compromised totes. Liquids were pumped or in some cases gravity drained to new totes which were then moved to the upper warehouse for temporary storage. In some instances where the containers were determined to be competent, the containers were removed from the building, decontaminated and moved to the upper warehouse for temporary storage. Emptied totes were removed from the lower warehouse/plant and given a gross decon and staged outside for future disposal. All compromised totes have been stabilized, contents transferred where necessary and moved to upper warehouse. An estimated 38 large totes (250 – 275 gallons in size) where emptied and removed from the lower warehouse/plant. A large intermodal tote of ammonium hydroxide was also removed and placed into storage in the upper warehouse.

Early efforts to stabilize conditions at the facility included removal of drums and other containers where the contents were determined to present an elevated risk. This included the removal of five drums containing Hydrogen Fluoride. These drums were removed from the lower warehouse/plant and staged temporarily in the upper warehouse, they are now located off-site. To improve access and address any remaining nitric acid liquids on the floor, drums, bags, boxes and pallets of various hazardous substances were also removed and relocated to the upper warehouse for temporary storage. Approximately 76 drums that were located on the floor beneath the racks were removed, deconned and transferred to upper warehouse for temporary storage. As the drums were removed, Lewis continued efforts to address the floor conditions to prevent slip and fall issues and movability of their fork lift and skid steer. Throughout these efforts Lewis conducted assessments of conditions inside the lower warehouse and provided daily updates and photos to BCI, PADEP and EPA.

On July 3, 2019, Lewis performed a transfer operation of the nitric acid (HNO3) from the blending tank in the lower warehouse/plant to stainless steel totes. Estimated 2008 gallons were transferred safely into seven 350-gallon stainless steel totes without incident. These totes were subsequently staged in the upper warehouse. Remaining large volumes of acids in the lower warehouse include phosphoric and sulfuric which are stored within poly tanks that are considered by all site personnel to be stable and therefore not required to be transferred.

On July 8, 2019, EPA, PADEP, START and Lewis principles performed aggressive site inspection of the lower warehouse with eye towards immediate chemical hazards. EPA OSC performed air monitoring during this inspection using the SPM Flex as a scanning tool for HNO3. Levels detected ranged from background to as high as 20ppb. These detection levels coincide with the data generated throughout EPA's air monitoring program at this site since the instruments were brought onsite. Based on this inspection, EPA/PADEP recommended additional tasks to be completed within the scope of stabilization phase. These tasks primarily included the removal and proper storage of all remaining metal drums, as it was obvious that these containers have been impacted by the aggressive corrosive atmosphere within the lower warehouse/plant. Approximately 250 drums were removed from the racks, assessed, deconned and staged appropriately per hazard class in the upper warehouse.

On July 10, 2019, the EPA OSC in consultation with PADEP and BCI determined that response actions necessary to stabilize the site were complete. EPA discontinued all air monitoring and EPA personnel and EPA contractors demobilized.

2.1.2 Response Actions to Date

Below is a summary of Site activities conducted between June 11, 2019 and July 10, 2019:

6/11/19

- START checked pH levels around temporary containment area previously constructed on the exterior of the building (lower warehouse/plant) near the south end of the property to contain site run-off: pH-4 inside containment area; pH- 6 near storm drain; pH-6 in former canal located between the road and the Schuylkill river.
- Overnight, First Call Environmental continued to conduct limited cleanup activities in an attempt to address the acidic liquids on the floor of the building.
- Miller Environmental pumped the liquid from the containment into a vacuum truck and transported it off-site.
- Sioux Environmental collected potentially contaminated soil and solids from the containment and the adjacent ditch and storm water catchment and placed it in on on-site roll-off for future disposal. A new containment was constructed.
- The OSC requested air monitoring assistance from EPA's Environmental Response Team (ERT). EPA ERT and it's Scientific, Engineering, Response & Analytical Services (SERAS) contractor arrived and set up air quality monitoring. These resources were mobilized and set-up continuous air quality monitoring at the facility and on the perimeter.
- After arriving on-site and meeting with BCI, PADEP and EPA representatives, Lewis Environmental set up decon facilities and made a level B entry to assess current conditions inside the lower warehouse/plant.
- Lewis found conditions inside the building to be highly corrosive and determined that the current conditions would require work be conducted in level A. Lewis collected two samples from the liquid on the floor of the building to help determine the appropriate equipment for stabilization and cleanup efforts. Samples we taken to the BCI lab for analysis. Lewis then left the Site to secure additional personnel, supplies and equipment.
- BCI working to improve site security and maintain road closures.

6/12/19

- ERT continuous air quality monitoring. Monitors outside the warehouse and in the community indicate acid gases and other chemical compounds are not being detected at actionable levels. START working to provide/maintain a figure of monitoring locations.
- Conducted site meetings with BCI and PADEP representatives. Primary objective was to determine the inventory and location of the various chemicals stored in the lower warehouse and to discuss concerns about possible incompatibles and high hazards. BCI indicated that nine of the "unknown" totes are likely untreated waste water. BCI indicated that seven 55-gallon drums of 49% HF are located near the north entrance of the building in an area that was not significantly impacted by the nitric acid release or the fire.
- BCI lab provided sample results for liquid samples collected from floor of lower warehouse/plant.
- Lewis Environmental mobilized additional resources and setup support facilities.
- In an effort to improve access to the containers in the building, Lewis entered the building from the south entrance and began efforts to pump liquid nitric waste from the floor. Recovered liquid was pumped to two new 275-gallon totes. At the end of the day's operations, one tote was full; second had only a limited amount of liquid. Entries to the building were made in level A; decon team is in level B.
- Lewis improved the containment on south side of building due to threat of rain.
- START conducted air monitoring using Draeger Tubes (Acid Test & HCl) outside the exclusion zone. No compounds were detected above the lower detection limit of the tubes.

6/13/19

- ERT conducting continuous air quality monitoring perimeter sampling at 5 locations, and also at one interior location. Readings outside of the building remain within acceptable levels. START to provide/maintain a figure of monitoring locations.
- START continues monitoring outside the exclusion zone with Draeger tubes (Acid Test & HCl). No compounds were detected above the lower detection limit of the tubes.
- Discussion regarding high hazard materials currently stored within the lower warehouse/plant took place.
- START checked pH levels of the rain water that collected in containment. All levels were neural. EPA and PADEP agreed the water could be released. Lewis released the water to drain the containment area. Containment to be maintained as a precaution.
- Lewis continued to pump liquids from the floor of the building to totes located outside.
- Meeting with PADEP, Berks County, Shoemakersville Fire Company and BCI to discuss status of site operations and to agree on emergency response plans in the event of an emergency. FD provided an emergency radio to ensure communication in the event of an emergency. FD indicated that the Township has been receiving calls from concerned residents. OSC agreed to work to improve public communication efforts. OSC contacted CIC to discuss community concerns.

6/14/19

- EPA ERT monitors outside the lower warehouse/plant and in the community indicate acid gases and other chemical compounds being monitored are not being detected at actionable levels.
- Lewis removed 5 HF drums (4-full, 1-½ full); 2 empty HF drums remain in the building. Lewis also removed Ferric Nitrate, Non-respon Non-respon [redacted] Hydrogen Peroxide 50%, and Tergitol drums. Prior to moving, all drums were assessed and found to be intact and did not appear to have been directly impacted by the nitric release or fire. The drums were staged outside of the building and further

inspected and then cleaned to remove any surface contamination. The drums were found to be competent and were later moved to the Non-resp [redacted]

- Lewis continued pumping operations to improve access to the building. As liquid is removed, oil dry is being placed.
- START continues monitoring outside the exclusion zone (HF, HNO3, HCl, and HCN) with Draeger tubes. No compounds were detected above the lower detection limit of the tubes.
- OSCs requested support from the USCG to oversee health and safety and medical monitoring.
- National Guard Civil Support team onsite to observe crew activities.
- EPA CIC finalized and distributed a fact sheet to the community to provide an update regarding site activities.

6/15/19

- EPA ERT monitors outside the lower warehouse/plant and in the community indicate acid gases and other chemical compounds being monitored are not being detected at actionable levels.
- Perimeter fencing around site was set up to improve site security.
- Lewis conducted recon of lower warehouse/plant and devised plan to stabilize certain totes. Efforts focused on the “L4” totes which were found to be stacked three high and were leaning on the racks.
- Lewis pumped out and transferred liquid from Tote ‘L4 top’ (Polyvinyl Alcohol Solution) to new tote; Tote ‘L4 middle’ (KOH water) was pumped out and transferred. Tote left in place in lower warehouse.
- START continues monitoring outside the exclusion zone (HF, HNO3, HCl, and HCN) with Draeger tubes. No compounds were detected above the lower detection limit of the tubes.

6/16/19

- ERT is currently conducting perimeter sampling at 8 locations, and also has one interior location set up. ERT monitors outside the warehouse and in the community indicate acid gases and other chemical compounds being monitored are not being detected at actionable levels.
- Lewis pumped out Tote ‘R2 bottom’ containing Nickel Nitrate Solution.
- Tote ‘R2 top’ containing Surfonic NP-95 leaked out onto floor and considered empty.
- Totes R1 and L5 containing N-methyl 2-pyrrolidone pumped out and bulked.
- Tote ‘R3 top’ previously unknown, classified as empty and removed.
- START continues monitoring outside the exclusion zone (HF, HNO3, HCl, and HCN) with Draeger tubes. No compounds were detected above the lower detection limit of the tubes.

6/17/19

- EPA ERT monitors outside the lower warehouse and in the community indicate acid gases and other chemical compounds being monitored are not being detected at actionable levels.
- START conducted private drinking water sampling at five adjacent residences. Preliminary results expected within a week.
- USCG Atlantic Strike Team on-site, per OSC's request, to assist with oversight of health and safety of operations, including oversight medical monitoring of Lewis crew. This includes the level A entry teams and the decon teams in level B. Heat stress is becoming more of a concern with the increased temperatures and humidity.
- Lewis continued pumping product from compromised totes from within the lower warehouse. Liquid was pumped to new totes which were then being moved to the upper warehouse. Once pumped out the damaged totes are being temporarily stored inside the lower warehouse/plant.
- Tote ‘R3 bottom’ containing Bulk Draw 480RLX pumped out. Some solution was left in tote and will be pumped out on 6/18/19.
- Tote ‘R4 top’ containing Phosphoric acid pumped out.
- Tote ‘R4 bottom’ containing Fluotitanic acid 60% pumped out.
- START continues monitoring outside the exclusion zone (HF, HNO3, and HCN) with Draeger tubes. No compounds were detected above the lower detection limit of the tubes.
- EPA, PADEP, BCI continue to work towards improving site controls and traffic controls to improve overall site safety for on-site personnel and the community. Flagger Force efforts in this regard have been inconsistent.

6/18/19

- Totes R5 Bottom (Hexafluorzirconic acid), R6 Top (Gluconic acid 50%), R6 Bottom (Sulfuric acid 50%), L1 (S-97 HSU Solution), and L2 Top (liquid Chromic acid) were all pumped and transferred to new containers.
- START conducted perimeter air monitoring using Draeger tubes for HCN, HF, and HNO3; No compounds were detected above the lower detection limit of the tubes.
- ALOHA models and reactivity models were updated based on changing site conditions.
- ERT continues to conduct continuous air monitoring in and around the lower warehouse and in the neighboring residential community. ERT monitoring locations remain the same. Monitors outside the warehouse and in the community indicate acid gases and other chemical compounds being monitored are not being detected at actionable levels.
- Drums of HF were moved off-site to BCI’s Blanden warehouse, as discussed.
- Efforts to improve site controls, including traffic controls continue.

6/19/19

- START continued with perimeter air monitoring using Draeger tubes (HF, HCN, Nitric). No compounds were detected above the lower detection limit of the tubes.
- The Hydrogen Peroxide drum was removed from site and transported to the Blanden warehouse.
- The large intermodal tote "L6” (Ammonium Hydroxide) was removed and placed into storage in the upper warehouse. The remaining liquid in Tote R3 Bottom was pumped (Bulk Draw 480RLX); L7 bottom (Glycol Ether EB) was removed and pumped; L7 top (Gastal L-61) was removed and pumped,

L-8 bottom (Arrow DISP W7512S) was removed and will be pumped 6/20/19, L-8 top identified as NAOH 50% began pumping and will be completed tomorrow.

- Chief Wagner, Shoemakersville Fire Company, on-site for an update regarding ongoing activities and to continue discussions regarding current site hazards and contingency planning in the event of an emergency.
- PADEP continues to assist with efforts to improve road closure signage to improve site control, traffic safety and overall public safety.
- EPA CIC is drafting an updated fact sheet for distribution on this Friday. Review is being coordinated with PADEP's community relations personnel.

6/20/19

- Tote L2 bottom was removed and pumped; L3 bottom leaked and the empty tote was removed; L3 top was pumped and removed; L4 bottom was pumped and removed. L9 bottom (Gastol 702) is scheduled to be pumped tomorrow; L8 bottom was pumped and removed.
- START continued monitoring the perimeter using Draeger tubes (HCN, HF, HNO3). No compounds were detected above the lower detection limit of the tubes.
- ERT placed a SPM Flex for HF at the southern bay door (Location 9).
- START Updated ALOHA model for 69% Nitric.
- Lewis collected 4 samples of material from the facility floor to be run in Bulk Chemicals lab.
- Flagger Force obtained additional signage and is working to improve site control and address traffic safety.
- EPA and PADEP plan to meet with Berks County HAZMAT tomorrow to provide an update regarding site stabilization efforts.

6/21/19

- Lewis pumped and transferred totes L9 top (Potassium Hydroxide 45%), L9 bottom (Gastal 702), L10 top (Bulk Kleen 769), L10 bottom (E-CLPS 2101), and R9 top (Fluotitanic acid 60%). On Monday June 10th, START had found R9 to be full and leaking. However, Lewis was not able to access the tote until today. The tote was approximately half full, remaining contents transferred to a new tote.
- START continued perimeter air monitoring using Draeger tubes (HF, HCN, and HNO3), no detections above the lower detection limit.
- Berks County HAZMAT was on-site to review progress.
- Initial IAP was finalized and provided to Fire Chief Wagner and Berks County HAZMAT.
- ERT continues to conduct continuous air quality monitoring in an around the warehouse and in the neighboring residential community. ERT added an additional SPM Flex at location 9 for HCN. Location 9 now monitoring for HF and HCN. Monitors outside the warehouse and in the community indicate acid gases and other chemical compounds being monitored are not being detected at actionable levels.
- EPA CIC delivered an updated community fact sheet to nearby residents. Additional fact sheets are being mailed.
- Flagger Force placed additional signage on Route 61 to improve traffic control.

6/22/2019

- Lewis pumped and transferred L11 bottom (NMP N-Methyl 2-Pyrrolidone), L11 top (wastewater) and picked are removed R7 (one drum of Bulk Bond 315MU and one drum of Phosphoric acid).
- ERT conducting continuous air monitoring in and around the warehouse and in the neighboring community. ERT placed a SPM flex (HNO3) in the NW corner of the Royal Trucking facility building; tubing runs up the side of the building. This is located southeast of the BCI facility and is identified as location 10. Monitors outside the warehouse and in the community indicate acid gases and other chemical compounds being monitored are not being detected at actionable levels.
- Two totes of N-Methyl 2-Pyrrolidone (R1 and L5) have been relocated to BCI's Blandon Warehouse.
- START continued to air monitor the perimeter of the site using Draeger tubes (HF, HCN, and HNO3) no detections.

6/23/19

- Lewis removed the contents of Rack 16 level 1, Potassium Ferric Cyanide and Sodium Fluoride were placed into individual poly drums. The Potassium Hexafluozircanate boxes were in good condition and remain in their original boxes, and the Potassium Fluoborate drum was also in good condition and remains in its original drum. Lewis also pumped and transferred totes L-13 top (2 drums of "floor sweepings" and L-13 bottom (wastewater).
- Lewis also identified two new totes of Chrome wastewater (Rack 11 level 1).
- Lewis pulled Draeger tubes in the building for HNO3, HCN, and HF. No detections on the HF or HCN, which were pulled in the southern end of the building. The HNO3 Draeger detected approximately 3ppm. The HNO3 Draeger was pulled directly next to the open tank of HNO3.
- START continued perimeter air sampling with Draeger tubes (HCN, HF, HNO3) no detections.
- ERT conducting continuous air quality monitoring in and around the warehouse and in the neighboring community. Monitors outside the warehouse and in the community indicate acid gases and other chemical compounds being monitored are not being detected at actionable levels. ERT relocated the position of location 7 inside the upper warehouse. Air monitor was moved closer to the door.

6/24/19

- Lewis pumped and transferred the remaining wastewater totes R8 and R9 bottom. Lewis also pumped the chrome wastewater totes located at rack 11 level 1. All compromised totes have been addressed; primarily by transferring contents to new totes which were then staged in the upper

warehouse.

- During an entry Lewis identified a possible minor leak possibly related to four 55-gallon drums of Glycol Ether EB. These drums are located on the second level of an unidentified rack. Lewis place a decon pool underneath to capture any leaking product.
- Lewis pulled more Draeger tubes for HNO3 throughout the building and had no detections.
- START also continued air monitoring the site perimeter with HNO3 Draeger tubes and also had no detections.
- ERT conducting continuous air quality monitoring in and around the warehouse and in the neighboring community. Monitors outside the warehouse and in the community indicate acid gases and other chemical compounds being monitored are not being detected at actionable levels.
- Discussed the need to transfer the nitric acid from the open top stainless process tank. Berks County HAZMAT had transferred more than 2000 gallons of nitric to the open tank from the leaking nitric tank on Sunday June 9th. The open tank was not intended for long-term storage. BCI looking to secure stainless totes appropriate for long-term storage. This is expected to help stabilize the atmosphere inside the building.
- BCI collected a soil sample from the southwestern edge of the facility along the road. The sample was analyzed in BCI's in-house lab. Total chrome was detected at a concentration of 52 ppm.
- Daily work schedule is being adjusted to start earlier (0600 and 0700), due to the heat.

6/25/19

- Lewis conducted recon of the inside of the lower warehouse/plant. Recon shows that racks are in relatively good condition.
- Lewis collected more Draeger tubes from within the facility for HNO3, no detections.
- ERT continues to conduct continuous air quality monitoring in and around the warehouse and in the neighboring community; acid gases and other chemical compounds being monitored are not being detected outside the warehouse or in the community at actionable levels.
- Exclusion zone has been reduced.
- To improve access within the lower warehouse/plant, Lewis removed and conducted a gross decon of six empty totes and staged them outside for future disposal. Decon water is being collected for future disposal.
- Lewis continues to apply oil dry to adsorb liquid on the floor of the lower warehouse/plant.
- BCI secured seven 350-gallon stainless steel totes to transfer the remaining Nitric acid (about 2000 gallons) from the open top process tank. Totes scheduled to be delivered next week.
- START received preliminary anion results for drinking water sampling. Results are below EPA MCLs. Awaiting results of metals analysis.

6/26/19

- Lewis continued to remove empty totes from the lower warehouse/plant; the totes were given a gross decon and staged outside for future disposal (15 remain).
- Lewis conducted more site recon inside the building, videos and pictures indicate that drums on the racks appear to be in good condition. Identified some areas that will need more oil dry.
- Lewis continued to address liquid remaining on the floor of the lower warehouse/plant by applying oil dry to wet areas, as needed.
- ERT continues to conduct continuous air quality monitoring in and around the warehouse and in the neighboring community; acid gases and other chemical compounds being monitored are not being detected outside the warehouse or in the community at actionable levels. ERT placed a SPM for HNO3 to the south of the facility.
- With conditions at the Site now more stable, it was decided no work will be conducted over the upcoming weekend (6/29 – 6/30) or over the 4th of July holiday weekend (from 7/4 - 7/7). ERT will maintain continuous air monitoring. The road will remain closed for this weekend. Flagger Force and site security will be on-site through the weekend. Expect to open the road, at least one lane, before the 4th of July holiday.
- PADEP met with Lewis to review disposal options for the different waste streams.
- EPA CIC is drafting a new fact sheet for distribution on Friday 6/28/19.

6/27/19

- Lewis conducted a gross decon of the remaining empty totes and staged them outside for future disposal.
- START received preliminary metals results for drinking water sampling. Results are below EPA MCLs. OSC reviewed results and provided to ATSDR for review. EPA CIC and OSC communicated results to individual residents.
- Updated IAP for next operational period and provided to Unified Command.
- Lewis removed several pallets from the 1st level of the racks and applied oil dry to the floor in these areas to address any remaining liquids.
- ERT continues to conduct continuous air quality monitoring in and around the warehouse and in the neighboring community; acid gases and other chemical compounds being monitored are not being detected outside the warehouse or in the community at actionable levels.
- EPA community update fact sheet was finalized; will be mailed to local residents.

6/28/19

- To improve access to the lower warehouse/plant and the all floor areas in order to address any remaining Nitric acid liquids, Lewis removed several pallets from the building and conducted a gross decon, as needed, and then relocated the materials to the upper warehouse. Nine 50lb bags of Ammonium Hydrogendifluoride, five 55lb bags of Boric acid loaded into one drum, two drums of Cola Trope 522, two drums of Surmax CS-522, two drums of Nitric acid 42 BE, and one full pallet of Titanium Phosphate bags (25kg) have been relocated to the upper warehouse. One super sack of

Zinc Oxide has slight damage to the bag; will be addressed and either relocated into the upper warehouse or staged back in the lower warehouse for the weekend.

- 1 bag of Potassium Ferricyanide, previously removed from the lower warehouse and staged in the upper warehouse, was taken to BCI's Blandon warehouse.
- Lewis will pull 2 samples for waste characterization; one from the roll-off and one from the facility floor.
- Site will be secured for the weekend. An emergency contact list for this weekend has been distributed.
- ERT continues to conduct continuous air quality monitoring in and around the warehouse and in the neighboring community; acid gases and other chemical compounds being monitored are not being detected outside the warehouse or in the community at actionable levels.

7/1/19

- Lewis pulled 10 pallets worth of drums out of the lower warehouse/plant. Drums were cleaned and transferred to new pallet and brought to the upper warehouse for storage. The DI water cylinders were also removed from the lower warehouse/plant.
- Lewis centralized all the floor product under the removed pallets into a pile at the southern end of the facility.
- EPA to relocate air monitoring location #1 to rear of site location near the proposed Nitric acid transfer activity for optimal assessment.

7/2/19

- Lewis removed/cleaned an additional 7 pallets worth of drums out of the lower warehouse and into the upper warehouse.
- Lewis collected 4 samples from the 3 waste water tanks and the waste water containment.
- BCI received seven 350-gallon stainless steel totes for the nitric transfer.

7/3/19

- Lewis transferred the approximate 2008 gallons of nitric out of the open top tank into seven 350-gallon stainless steel totes. Air monitoring locations were adjusted to provide better coverage during the transfer operations. Once operations were complete they were relocated back to their original locations. The following preparatory steps were followed as mandated by the EPA OSC:

1. Proper grounding and bonding – HASP JSA

2. Berm and sorbents around totes

3. Use of facility blend tank pumping and scale system to help determine adequate flow, discharge rates and completion, test run to be completed

4. Industrial fan to provide engineering control of wind direction

5. Repositioning of acid gas SPMs to ascertain toxicity of airborne levels strategically

6. Inspection of the SS totes for foreign material

7. Spare poly drums nearby for potential overflow

8. Normal evac procedure reviewed – EPA CP to be evacuated during op

9. Final safety walkthrough for all site personnel

10. Weather conditions are overcast, rain forecasted for afternoon

11. Fire Chief of Shoemakersville notified during on-site meeting on 7/2 and Berks County OEM Chief notified both via email yesterday and follow-up phone call this morning

12. Unified Command in agreement that operation is good to go

- Stainless steel totes have been relocated to the upper warehouse.
- Lewis received roll-off container for their PPE waste
- Lewis secured the site for the long holiday weekend. No work planned.

7/8/19

- Lewis cleaned remaining residual from totes for disposal.
- EPA, PADEP, START, and Lewis performed site entry into the lower warehouse. A SPM Flex was provided by ERT for air monitoring. No detections were above 20 ppb for HNO3 during entry.
- Based off observations from the lower warehouse, EPA and DEP made recommendations to BCI to remove all metal drums from the lower warehouse/plant due to possible instability.

7/9/19

- Lewis continued to move drums from the lower warehouse/plant to the upper warehouse; OSC requested that these drums not be stacked due to concerns regarding possible degradation.
- Lewis continued to clean the floor inside the lower warehouse/plant.
- ERT removed air monitoring location 10 from the nearby trucking company to the fence of the back of the BCI property.

7/10/19

- Lewis competed removal of corroded drums and other containers from lower warehouse/plant.
- EPA and START made a final entry to observe conditions inside the lower warehouse/plant.
- EPA, PADEP, Lewis and BCI agree that conditions at the site have been stabilized.
- Lewis worked to remove the bulk of the remaining absorbent (oil dry) from the floor of the lower warehouse/plant. This work is expected to be completed by tomorrow.
- Lewis to lift the road closure by COB and Flagger force will demobilize personnel.
- EPA notified property owners and residents of the planned road opening
- Air monitoring did not indicate any actionable levels. EPA ERT discontinued all air monitoring efforts and removed all monitoring equipment.
- START, EPA and ERT all off-site by COB.
- PADEP Emergency Response to remain on-site through the end of the week.

2.1.3 Enforcement Activities, Identity of Potentially Responsible Parties (PRPs)

The Site is owned and operated by BCI. BCI accepted responsibility for the cleanup and performed all necessary response actions to stabilize the Site. No enforcement tools were in place during site stabilization efforts. EPA and PADEP conducted joint oversight of the response actions conducted by BCI's contractor, Lewis Environmental.

The OSC provided verbal Notice of Federal Interest (NOFI) to BCI representatives shortly after arriving on-site on June 10, 2019. Written NOFI was provided on June 12, 2019 and was acknowledged via signature by the BCI representative on June 14, 2019.

2.1.4 Progress Metrics

On June 17, 2019, EPA and START collected water samples from private drinking wells located on five nearby properties to evaluate possible impacts resulting from the nitric acid release and subsequent fire. The water samples were analyzed for a limited number of chemical elements and compounds, based on the chemicals that were known to be released or were possibly released at the facility. In June, preliminary results were shared verbally with property owners and residents. In August, EPA received the final validated laboratory results and mailed the results to property owners and tenants. The reported results are below levels of concern and do not suggest the wells were impacted by the release at the facility. To ensure that conditions have not changed, additional sampling of private drinking water wells is planned. Future sampling efforts are expected to be conducted by environmental consultants for BCI under PADEP's oversight.

Community relations fact sheets were distributed throughout the response in an effort to keep community informed. A final fact sheet was mailed in August. In addition to noting that final sampling results of private drinking wells showed not impact from the spill, the final fact sheet indicated that Site stabilization efforts have been completed and that EPA has concluded its response oversight and air quality monitoring. The final fact sheet indicated that or the duration of the continuous air monitoring (June 11-July 10), air quality remained safe for residents.

2.2 Planning Section

2.2.1 Anticipated Activities

PADEP is overseeing the cleanup and disposal of any residual contamination by BCI and its contractors. PADEP will also oversee additional site investigations. BCI's environmental consultant is working in conjunction with its cleanup contractor to perform soil sampling and cleanup, as necessary. Future sampling of private drinking water wells is expected to be conducted by environmental consultants for BCI.

2.2.1.1 Planned Response Activities

No additional on-site activities by EPA are anticipated. The OSC will continue to coordinate with state and local officials, as needed.

2.2.1.2 Next Steps

2.2.2 Issues

At midnight on June 28, 2019, OSC Chase received a call from Shoemakersville Fire Chief Wagner who received a report from the on-site security regarding vapors emanating from the vent system on the lower warehouse. OSC Chase and Mike Hoppe of EPA ERT met the Chief and the owner of BCI on-site for a few hours into the early morning. No compounds of concern were detected on EPA air monitoring instrumentation prior to, during or after our response, but there were visible signs of vapors. Speculation was that the vapors were the result of ongoing reaction/neutralization from earlier Site activities. ERT placed two on-Site cameras to provide some remote visualization capabilities. It was expected that these vapors may persist at night, depending on meteorological conditions.

2.3 Logistics Section

No information available at this time.

2.4 Finance Section

2.4.1 Narrative

On June 10, 2019, EPA Region 3 issued a verbal work assignment to its Superfund Technical Assessment and Response Team (START) contractor to provide technical assistance during the response action. Written confirmation followed in the form of a Technical Direction Document (TDD) on June 17, 2019.

On June 11, 2019, EPA Region 3 requested EPA ERT to provide technical assistance by conducting air monitoring at the Site. A written procurement request followed on June 21, 2019.

On June 14, 2019, EPA Region 3 issued an Authorization of Work Form to the USCG Atlantic Strike Team to assist EPA OSC's with oversight of health and safety of the operations being conducted by the contractor for the responsible party. Funding was available in the non-specific Interagency Agreement (#DW7095861601).

Estimated Costs *

	Budgeted	Total To Date	Remaining	% Remaining
Extramural Costs				
USCG IAG	$25,000.00	$6,000.00	$19,000.00	76.00%
START	$89,662.00	$48,000.00	$41,662.00	46.47%
SERAS	$200,000.00	$90,000.00	$110,000.00	55.00%
Intramural Costs				
Total Site Costs	$314,662.00	$144,000.00	$170,662.00	54.24%

* The above accounting of expenditures is an estimate based on figures known to the OSC at the time this report was written. The OSC does not necessarily receive specific figures on final payments made to any contractor(s). Other financial data which the OSC must rely upon may not be entirely up-to-date. The cost accounting provided in this report does not necessarily represent an exact monetary figure which the government may include in any claim for cost recovery.

2.5 Other Command Staff

No information available at this time.

3. Participating Entities

3.1 Unified Command

EPA, PADEP and BCI maintained an on-site presence throughout stabilization efforts. Berks County Department of Emergency Services and Shoemakersville Fire Company were informed of operations and provided support, as needed. There was a high level of cooperation amongst all parties throughout the response.

3.2 Cooperating Agencies

Berks County Department of Emergency Services
Shoemakersville Fire Company
Perry Township
Ontelaunee Township, PA

4. Personnel On Site

No information available at this time.

5. Definition of Terms

No information available at this time.

6. Additional sources of information

7. Situational Reference Materials

No information available at this time.